

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 04 APR 2006

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Applicant's or agent's file reference 12524321	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/AU2005/000395	International filing date (<i>day/month/year</i>) 18 March 2005	Priority date (<i>day/month/year</i>) 19 March 2004	
International Patent Classification (IPC) or national classification and IPC			
Int. Cl. E04H 17/22 (2006.01) E02D 17/20 (2006.01)		E04H 17/02 (2006.01) E04H 17/14 (2006.01)	
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1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 12 sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☒ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 23 December 2005	Date of completion of this report 14 March 2006
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer VENKAT IYER Telephone No. (02) 6283 2144

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2005/000395

Box No. I Basis of the report

1. With regard to the **language**, this report is based on:

☒ The international application in the language in which it was filed

☐ A translation of the international application into translation furnished for the purposes of:

, which is the language of a

☐ international search (under Rules 12.3(a) and 23.1 (b))

☐ publication of the international application (under Rule 12.4(a))

☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

☐ the international application as originally filed/furnished

☒ the description:

pages **1,3-5,7-8,10-19** as originally filed/furnished

pages* received by this Authority on with the letter of

pages* **2,2a,6,6a,9** received by this Authority on **23/12/05** with the letter of **23/12/05**

☒ the claims:

pages as originally filed/furnished

pages* as amended (together with any statement) under Article 19

pages* **20-26** received by this Authority on 23/12/05 with the letter of 23/12/05

pages* received by this Authority on with the letter of

☒ the drawings:

pages as originally filed/furnished

pages* **1/21-21/21** received by this Authority on 5/04/05 with the letter of 5 04/05

pages* received by this Authority on with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages

☐ the claims, Nos.

☐ the drawings, sheets/figs

☐ the sequence listing (*specify*):

☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages

☐ the claims, Nos.

☐ the drawings, sheets/figs

☐ the sequence listing (*specify*):

☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation to restrict or pay additional fees the applicant has, within the applicable time limit:
- ☐ restricted the claims
 - ☒ paid additional fees
 - ☐ paid additional fees under protest and, where applicable, the protest fee
 - ☐ paid additional fees under protest but the applicable protest fee was not paid
 - ☐ neither restricted the claims nor paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
 - ☒ not complied with for the following reasons:

The international application does not comply with the requirements of unity because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion the International Searching Authority has found that there are different inventions as follows:

1. Claims 1 to 21 are directed to a temporary fence comprising a plurality of adjacent barrier assemblies including one or more posts with panels mounted thereon, and anchors assemblies for anchoring adjacent posts, each anchor assembly including first and second anchor elements with a cleft disposed between the anchor elements when assembled, the cleft adapted to receive a silt barrier therein, the cleft and silt barrier extending parallel to the barrier assembly when assembled with the anchor assembly extending perpendicularly to the barrier assembly. It is considered that "the cleft disposed between the anchor elements and receiving the silt barrier therein" comprises a first special technical feature.
2. Claims 22 to 36 are directed to a fence mounting device for mounting a silt fence to a fence post including a main body mountable to a fence post and attachment means to which the silt fence can be releasably secured with tensioning means for tensioning the upper portion of the silt fence, which on rotation of the attachment means tightens the silt fence against the main body. It is considered that "that a tensioning device mountable to a fence post with a rotatable attachment means to secure and tension an attached silt fence" comprises a second special technical feature.

See Supplemental Box

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☒ all parts.
- ☐ the parts relating to claims Nos.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2005/000395

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-47	YES
	Claims -	NO
Inventive step (IS)	Claims 1-47	YES
	Claims -	NO
Industrial applicability (IA)	Claims 1-47	YES
	Claims -	NO

2. Citations and explanations (Rule 70.7)

None of the citations, when considered either singly or in any obvious combination, explicitly disclose or suggest the combination of features in claims 1, 22 or 37 and their appended claims.

The closest art is DE 29917244, EP 428468 and DE 10111272 respectively. In the first citation there is no disclosure of a cleft between the anchor elements adapted to receive a silt barrier. In the second citation there is no disclosure of a tensioning means capable of rotation to tighten the silt fence. In the third citation there is no disclosure of a clamp in two parts to releasably hold a textile fence to a post.

Accordingly, the claimed inventions of claims 1, 22 and 37 are considered to be novel and to possess an inventive step in light of the citations.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of **Box No: IV**

3. Claims 37 to 45 are directed to a fence mounting device for mounting a textile fence to a post including a releasable clamp attachable to a post so that a portion of the textile fence may be received and releasably retained adjacent the post the clamp including two detachable parts, the first part receiving the textile fence and the second part is a mating key. It is considered that "a clamp of two parts to releasably hold a textile fence to post" comprises a third special technical feature.

Since the abovementioned groups of claims do not share any of the technical features identified, a "technical relationship" between the inventions, as defined in PCT rule 13.2, does not exist. Accordingly the international application does not relate to one invention or to a single inventive concept, a priori.

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free of weeds. The dual requirement of a silt fence and a temporary safety fence is therefore cumbersome to construct and inconvenient to maintain during the course of building objects.

5 Known methods of connecting silt fences to posts generally involve staples or other fasteners which are time consuming and inflexible.

The present invention seeks to ameliorate one or more of the above-mentioned disadvantages.

10

Summary of the Invention

According to one aspect of the present invention there is provided a temporary
15 fence including: a plurality of adjacent barrier assemblies, each barrier assembly including one or more posts and a fence panel associated with the one or more posts and mounted thereon; one or more anchor assemblies each for anchoring adjacent posts of adjacent barrier assemblies, for anchoring the or each anchor assembly including a first anchor element, and a second anchor element, each anchor element including a longitudinal axis
20 extending perpendicularly to the fence panels for improved stability, a cleft being disposed between each anchor element when assembled, wherein the cleft is adapted to receive a silt barrier therein, the cleft extending in a direction parallel to the or each barrier assembly when assembled.

25 Preferably a silt barrier is provided, which is operatively connectable to the barrier assembly in such an arrangement that the silt barrier when installed extends generally parallel with the fence panels.

Preferably, the cleft extends generally parallel with the fence panels when installed,
30 such that some portions of the silt barrier are disposed at least partially within the cleft of the anchor when installed.

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Preferably, the cleft is disposed generally vertically when the fence is assembled, and in preferred forms the cleft is provided generally transversely across the entire depth of the anchor, between the first piece and the second piece.

- 5 The first and second pieces may be similar in size construction and materials, however, some embodiments include differing sizing and constructions of the first and second

plurality of fence panels, each having a pair of posts, supporting an infill panel of wire mesh, suitable for inhibiting access to an area. The silt fence is generally in the form of a geotextile fabric, which in one embodiment has a belt sewn into the top of the fabric for
5 strengthening or for supplementary connection to attachment means.

Preferably the mounting bracket is for use with the silt fence. The attachment means is disposed in relation to the anchor such that the fence can extend into the earth upon which the fence is erected.

10

The mounting bracket may be integral with or connected to the post for the first fence. The mounting bracket may be any suitable shape, however, in preferred embodiments the mounting bracket is a trapezoidal or triangular shape, tapering downwards toward the attachment means in order to provide increased moment resistance
15 at the interface between the mounting bracket and the post for the first fence.

The anchor may be in the form of a block formed from any suitable material such as concrete, timber, plastics, and the like. Preferably the blocks are in the form of concrete blocks. The post mounting for the first fence may be in the form of an aperture extending
20 into the block from an upper surface thereof.

According to yet another aspect of the present invention there is provided a fence mounting device adapted for mounting a silt fence to a fence post, the fence mounting device including: a main body which is mountable to the fence post; and an attachment
25 means mounted on the main body to which the fence can be releasably secured; wherein tensioning means are provided, which are suitable for tensioning an upper portion of the silt fence, the arrangement being such that, when the upper portion of the silt fence is secured in the attachment, rotating the attachment means and the main body tightens the fence against the main body.

30

In one form the main body includes an end cap which is adapted to be fitted over a top end portion of the fence post. The end cap may include a cap body having a hollow section therein for receiving the top end portion of the fence post. The cap body may include a dome shaped upper portion with a skirt extending downwardly therefrom. The

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attachment may be in the form of a hook-like element secured to or integral with the wall of the cap body.

main body hollow section which correspond to respective edge formations on the post.

5 In one form, eight recesses are provided at the inner walls of the hollow section. In this embodiment, every second recess mates with a respective edge of a square post when the cap is mounted on the post. Thus the cap may be rotated in increments of 45° by either rotating the cap whilst on the post, forcing the edges of the post into an adjacent recess and interlocking therewith, or lifting the cap off the post, rotating the cap and replacing the cap at a tightened position further around the posts.

10

Rotating the end cap draws the belt from its hem, thus tightening the upper edge of the silt fence.

15 According to still another aspect of the present invention there is provided a fence mounting device adapted for mounting a textile fence to a post, the fence mounting device including: a releasable clamp attachable to a post so that at least a portion of the fence may be received in the clamp and releasably retained adjacent the post the releasable clamp including first and second detachable parts, wherein a first part is a receiver and the second part is a key which mates with the receiver.

CLAIMS:

1. A temporary fence including: a plurality of adjacent barrier assemblies, each barrier assembly including one or more posts and a fence panel associated with the one or
5 more posts and mounted thereon; one or more anchor assemblies each for anchoring adjacent posts of adjacent barrier assemblies, the or each anchor assembly including a first anchor element, and a second anchor elements, each anchor element including a longitudinal axis extending perpendicularly to the fence panels for improved stability when assembled, a cleft being disposed between each
10 anchor element when assembled, wherein the cleft is adapted to receive a silt barrier therein, the cleft extending in a direction parallel to the or each barrier assembly when assembled.
2. A temporary fence in accordance with claim 1 wherein a silt barrier is provided,
15 which is operatively connectable to the barrier assembly so that at least a portion of the silt barrier when installed extends substantially parallel with the fence panels within the clefts.
3. A temporary fence in accordance with claim 1 or 2 wherein a connecting means is
20 provided for connecting two adjacent posts of adjacent barrier assemblies together, so that additional strength may be obtained from resistance provided by an adjacent anchor element.
4. A temporary fence in accordance with claim 3 wherein the connecting means are
25 stock yard clamps mounted at an intermediate location along the posts.
5. A temporary fence in accordance with any previous claim wherein the first and second anchor elements are similar to one another in size, construction and materials.
30
6. A temporary fence in accordance with claim 5 wherein the first and second anchor elements are both blocks.

7. A temporary fence in accordance with claim 6 wherein the blocks are constructed from concrete.
8. A temporary fence in accordance with any one of claims 6-7 wherein the or each
5 block includes apertures for receiving and supporting base portions of respective posts.
9. A temporary fence in accordance with claim 8 wherein the apertures are through
apertures which extend from an upper face of the or each block to a base face of the
10 or each block when installed upright.
10. A temporary fence in accordance with any previous claim wherein coupling means
may be provided to couple two blocks together, so that the posts may access a
doubling of anchor mass as well as increased stability.
- 15 11. A temporary fence in accordance with claim 10 wherein the coupling means is
provided by an aperture, which is fully formed from two depressions in
corresponding faces of the anchor when two pieces of a anchor assembly are
brought together and the corresponding faces abut one another.
- 20 12. A temporary fence in accordance with claim 11 wherein each face incorporates a
hollow in the form of a half cylinder being cut along a longitudinal axis of the
anchor element.
- 25 13. A temporary fence in accordance with claim 12 wherein the half cylindrical
aperture is made whole when the face is mated at a mating wall with another
anchor block with corresponding recesses therein.
14. A temporary fence in accordance with claim 13 wherein the apertures are located
30 along an adjacent wall, adjacent an end thereof, so as to allow the post and block to
resist push over in one of the longitudinal directions.
15. A temporary fence in accordance with any previous claim wherein the second
anchor element is in the form of a plate which has a longitudinal axis which when

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installed extends perpendicular to the fence panels to provide extra stability.

16. A temporary fence in accordance with claim 15 wherein the or each plate also includes one or more post receiving apertures, each of which support the posts in a generally upright orientation when assembled therein.
17. A temporary fence in accordance with any previous claim wherein the posts may be mounted on a spigot, protrusion or boss extending from an anchor piece of smaller external diameter than the internal diameter of the post.
18. A temporary fence in accordance with any previous claim wherein a restriction assembly is provided to - restrict the gap between the ground and a base portion of the fence panel.
19. A temporary fence in accordance with claim 18 wherein the assembly includes a bracket and a post, laid horizontally and operatively connected to a base portion of the fence panel to engage a sandbag and a silt barrier simultaneously.
20. A temporary fence in accordance with claim 19 wherein the bracket pivots to encourage downward pressure onto the silt barrier and the ground, when under pressure from silt.
21. A temporary fence in accordance with any previous claim wherein two panels are mounted to each post.
22. A fence mounting device adapted for mounting a silt fence to a fence post, the fence mounting device including: a main body which is mountable to the fence post; and an attachment means mounted on the main body to which the fence can be releasably secured; wherein tensioning means are provided, which are suitable for tensioning an upper portion of the silt fence, the arrangement being such that, when the upper portion of the silt fence is secured in the attachment, rotating the attachment means and the main body tightens the fence against the main body.

23. A fence mounting device in accordance with claim 22 wherein the main body includes a cap which is adapted to be fitted over a top end portion of the fence post, the cap including a dome shaped upper portion with a skirt extending downwardly therefrom, the attachment means being in the form of a cleat, secured to or integral with the cap body.
24. A fence mounting device in accordance with any one of claims 22-23 wherein a silt fence is provided, constructed from a fine mesh material
25. A fence mounting device in accordance with claim 24 wherein the material includes eyelets which can be placed over the cleat elements to retain it in position on the mounting device.
26. A fence mounting device in accordance with any one of claims 24-25 wherein a belt is sewn into a hem in a top edge of the barrier, the hem having slots through which the belt may be withdrawn to fasten the belt to the cleats.
27. A fence mounting device in accordance with any one of claims 22-26 wherein the mounting device is adapted to be mounted to fence posts of the type commonly referred to as star posts, having an elongated body with a plurality of radially extending flanges angularly disposed with respect to one another, the flanges extending the length of the post, and extending generally radially from a central axis of the post body.
28. A fence mounting device in accordance with any one of claims 22-27 wherein the tensioning device is in the form of a socket.
29. A fence mounting device in accordance with any one of claims 22-27 wherein the tensioning means is a ratchet so that the main body does not need to be removed from the post in order to tension the upper portion.
30. A fence mounting device in accordance with claim 29 wherein the ratchet is in the form of one or more angled teeth which are moulded into the internal walls of the main body and projecting a hollow section of the main body.

31. A fence mounting device in accordance with claim 30 wherein the teeth are arranged such that when the main body is rotated in a tightening direction, the teeth are forced flat against the internal walls of the main body by edges or walls of the post, and when tension in the fence causes the main body to rotate in a loosening direction, the teeth are forced into an open locking position, extending further into the hollow section by the walls or edges of the post, inhibiting rotation of the main body relative to the post.
32. A fence mounting device in accordance with any one of claims 28 or 29 wherein the ratchet or socket includes locking recesses defined by spaced, tapering dividers extending from inner skirt walls so as to lock several sizes of star picket and square posts.
33. A fence mounting device in accordance with any one of claims 23-32 wherein the skirt includes one or more recesses for receiving a belt so as to improve and simplify smooth running and tying of the belt around the attachment means.
34. A fence mounting device in accordance with claim 33 wherein the recesses are one or more cut outs adjacent the attachment means, the cut outs at the base of the skirt.
35. A fence mounting device in accordance with any one of claims 22-34 wherein ribs are provided to support edges of posts received by the main body and to promote tight fit of cap on post.
36. A fence mounting device in accordance with any one of claims 32-35 wherein the dividers taper inwardly in order that smaller posts are supported deeper within the main body.
37. A fence mounting device suitable for mounting a textile fence to a post, the fence mounting device including: a releasable clamp attachable to a post so that at least a portion of the fence may be received in the clamp and releasably retained adjacent the post the releasable clamp including first and second detachable parts, wherein a first part is a receiver and the second part is a key which mates with the receiver.

38. A fence mounting device in accordance with claim 37 wherein the receiver is mountable to the post.
- 5
39. A fence mounting device in accordance with claim 37 or 38 wherein the receiver includes a receiving void between spaced-apart walls for receiving a fence therein.
40. A fence mounting device in accordance with claim 39 wherein a pair of the spaced
10 - apart walls taper towards one another.
41. A fence mounting device in accordance with claim 40 wherein the taper is towards a front face when the receiver is installed on the post.
- 15 42. A fence mounting device in accordance with claim 39 or 40 wherein the void is enclosed by three spaced-apart walls, to define an open face to reduce mass and allow ease of assembly of the textile fence.
- 20 43. A fence mounting device in accordance with any one of claims 37-42 wherein the key includes a main key body for inserting into the receiver, and when assembled, the fence is laid in the receiver, and the main key body is disposed parallel with a main longitudinal axis of the receiver, so the main key body abuts at least some of the spaced-apart walls of the receiver in order to clamp the fence to the post.
- 25 44. A fence mounting device in accordance with any one of claims 37-43 wherein the key is provided with a depth stop.
45. A fence mounting device in accordance with any one of claims 37-44 wherein the key is inserted from an open end above the receiver when mounted on a post.
- 30 46. A temporary fence substantially as hereinbefore described with reference to the accompanying drawings.

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47. A fence mounting device substantially as hereinbefore described with reference to the accompanying drawings.

5 DATED this 21st day of December 2005.